

Proline Promag E 100

Proline Promag 10E/50E/53E

Flow measurement for basic applications in the chemical and process industry

Economical – robust – reliable

- Proven sensor technology:
Over 1.7 million electromagnetic flowmeters installed successfully since 1977
- Wide nominal diameter range:
DN 15 to 600 (½ to 24")
- Broad application range:
Measure, monitor and control electrically conductive liquids
- High chemical resistance, e.g. when measuring acids, bases, saline solutions or process water
- Measurement virtually independent of pressure, density, temperature and viscosity of the fluid
- Reliable long-term operation thanks to high repeatability
- Cost-effective operation:
 - Easy installation
 - Maintenance-free, no moving parts
 - Free cross-section, no pressure loss
 - Wide operable flow range (1000:1)
 - Preconfigured to customer specifications (optional)



Proline simply clever

Process monitoring is becoming more demanding and the need for maximum product quality is steadily increasing. This is why Endress+Hauser continues to provide industry-specific flow measurement solutions optimized for future technology requirements.

The new generation of our Proline flowmeters is based on a uniform device concept. This means time and cost savings, as well as maximum safety over the entire plant life cycle.

HistoROM

- Automatic data storage ensures maximum plant safety
- Simple data restoration enables quick exchange of components

Web server

- Time-saving local operation without additional software
- Comprehensive access to device, diagnostics and process information

Heartbeat Technology™

- Permanent self-monitoring for all Proline measuring technologies
- Diagnostics for reduced maintenance and quick remedy



Promag E

Robust and reliable in operation

Is competition forcing you to cut costs and keep them low? Do you want to be completely sure that your investments in metering infrastructure will pay off in the long term? Is compliance with quality standards your highest priority? Then Promag E is the perfect solution for your application.

Promag E is an electromagnetic flowmeter developed specifically for basic applications in the chemical and process industry to reliably measure, monitor and control conductive liquids:

- Acids and bases
- Saline solutions
- Process water and industrial wastewater

The Promag E is backed by the practical experience from more than 1.7 million installed flowmeters. As a robust sensor without moving parts, it guarantees measurement results with high repeatability that are stable over long term even under difficult process conditions. Promag E can be supplied with various equipment, allowing it to be perfectly matched to your application:

- Corrosion-resistant PTFE lining
- Measuring electrodes from various, acid-resistant materials
- Worldwide recognized Ex approvals (zone 2)

And last but not least, you can choose between five different transmitters that guarantee seamless system integration and optimal operating convenience. Wherever your process takes you, Promag E lets you benefit from high operational safety, cost assurance and production reliability – day after day, around the clock.



Promag 10E (DN 200/8")

Promag E 100 (DN 50/2")



Transmitters for every application

Promag E can be combined with different transmitters and therefore matched precisely to predominant on-site conditions.

Promag 10

- For basic applications
- Cost-efficient transmitter
- Two-line display with push buttons
- Communication:
 - HART



Promag 50

- For standard applications
- Two-line display with push buttons
- Fast commissioning via Quick Setup
- Communication:
 - HART
 - PROFIBUS PA/DP



Promag 53

- For demanding applications
- High functionality (batching, dosing, electrode cleaning, diagnostics, etc.)
- Four-line display with Touch Control
- Communication:
 - HART
 - PROFIBUS PA/DP
 - Modbus RS485
 - FOUNDATION Fieldbus
 - EtherNet/IP



Promag 100

- Ultra-compact transmitter made of aluminum
- Full functionality in a small package
- Optionally with plug connectors
- Communication:
 - HART
 - PROFIBUS DP
 - Modbus RS485
 - FOUNDATION Fieldbus
 - EtherNet/IP





Technical data

Promag E (sensor)

Nominal diameter	DN 15 to 600 (½ to 24")
Process connections	Flange: EN (DIN), ASME, JIS
Measuring range	4 dm ³ /min to 9600 m ³ /h (1 to 44 000 gal/min)
Process pressure	PN 10 to 40, Cl 150, JIS 10 to 20K
Process temperature	-10 to +110 °C (+14 to +230 °F)
Degree of protection	Compact version: IP67 (Type 4X enclosure) Option (remote version): IP68 (Type 6P enclosure)
Max. measured error	Standard: ±0.5% o.r. ± 1 mm/s (0.04 in/s) Option: ±0.2% o.r. ± 2 mm/s (0.08 in/s)
Operable flow range	1000:1
Materials	Liner: PTFE Electrodes: 1.4435 (316L), Alloy C22, tantalum
Electrical conductivity	With Promag 10: ≥50 μS/cm With Promag 50, 53: ≥5 μS/cm (≥20 μS/cm with demineralized water) With Promag 100: ≥5 μS/cm
Approvals	3.1 material, PED
Ex approvals	ATEX, IECEx, cCSAus, NEPSI

Subject to modification

The Promag E 100, 10E, 50E and 53E measuring systems fulfill the EMC requirements according to IEC/EN 61326 and NAMUR NE21. They also conform to the requirements of the EU and ACMA directives and thus carry the  and  mark.

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